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MRS-32HS 32x32 HD/SD routing switcher

User manual V1.0

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Table of Content

MRS-32HS   32x32 HD/SD routing switcher

Ⅰ Description

MRS-32HS is a high performance and low cost HD/SD routing switcher which can be widely used in signal control of middle-small size broadcasting system. It adopts host and remote control panel separation structure. The two telecontrol panel modes of X+Y/32X1 can meet the requirement of different control of multiple or single output busbar. The host is a 3RU chassis with dual power supply, compact internal structure make the body's height only 8cm. The host can support four telecontrol panels, user can choose freely the panel through special software. MRS-32HS also support output changing –over of independent busbar of 32 channels' HD/SD self-adaptive embedded signals, can meet the requirement of different control of multiple or single output busbar.

The system adopts field blanking switching, provide independent external synchronous interface, totally avoid shake when switching. It provides RS232 serial port, which can be connected with broadcast system to realize comprehensive automatic signal scheduling. Its design structure and performance gives users the best use security, applicable to the studio, broadcast center, broadcast and other various high-performance real-time occasions.

Ⅱ Features

● 3RU chassis with dual power supply,   two telecontrol panel modes of X+Y/32X1

● Support output changing –over of independent busbar of 32 channels' HD/SD self-adaptive embedded signals, can meet the requirement of different control of multiple or single output busbar
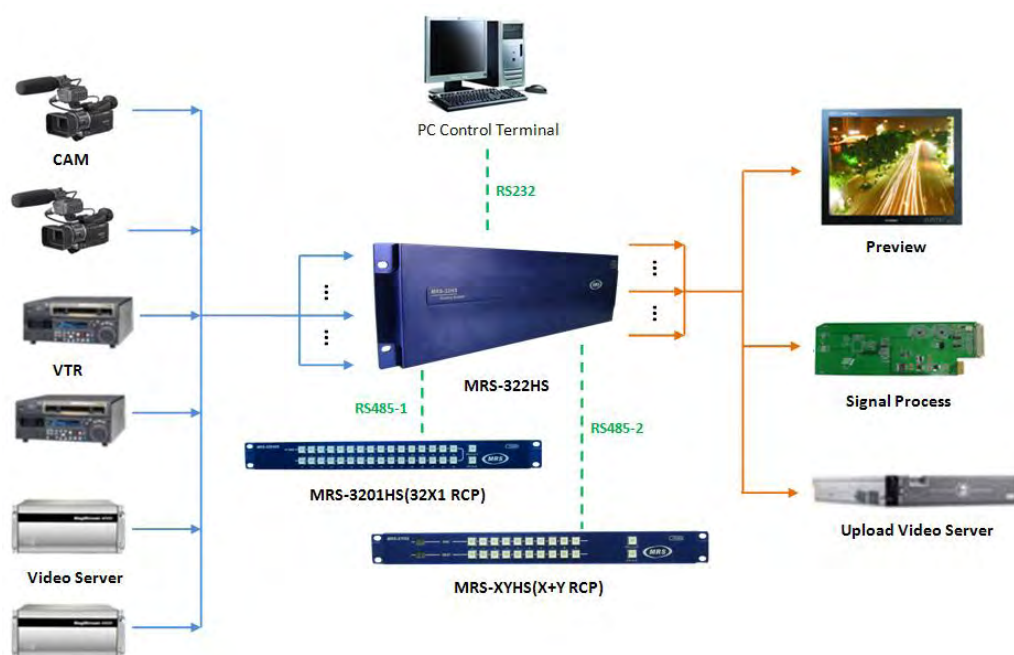
● Support four telecontrol panels, user can choose freely the panel through special software

- 20bit digitization, high quality, high stability

- The field blanking processing provides an independent external sync. interface, and will ensure the switching without mute and flicker

- RS232, and RS485

- It supports computer control, easy to use

Ⅲ MRS-32 HS application

Ⅳ MRS-32 HS Front panel & rear panel diagram
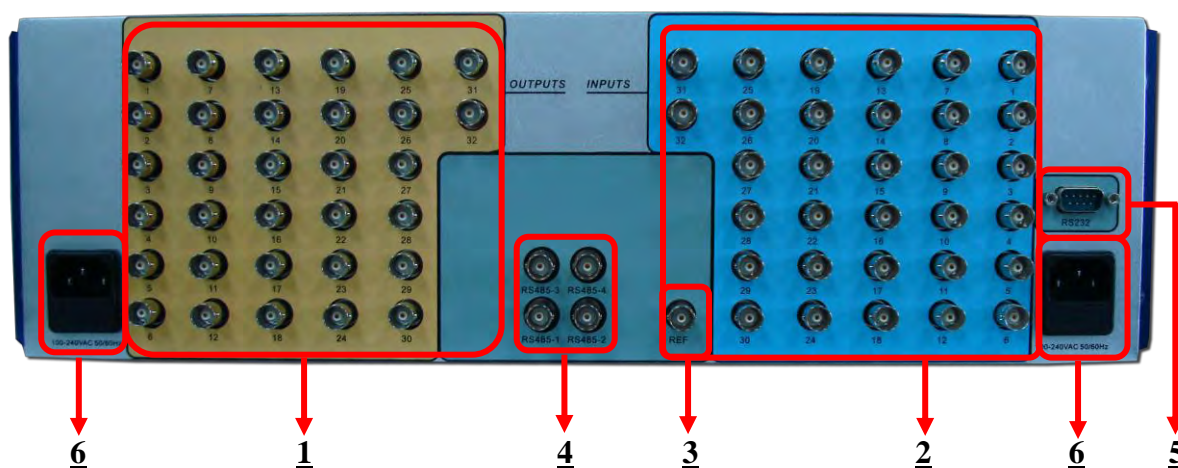
4.1 MRS-32HS Front panel of host

Power Indicator: Two indicators show the dual power working status.

PSU-1:   When the Power 1 is working, the indicator shows blue

PSU-2：When the Power 2 is working, the indicator shows blue

4.2 MRS-32HS Rear panel of host

1) Output interface: All output interfaces in the yellow area. MRS-32 HS with 32 HD/SD output interfaces, and support embedded signal.

2) Input interface: All input interfaces in the blue area. MRS-32 HS with 32 HD/SD input interfaces, and support embedded signal.

3) External phase lock interface: it is used to connect with external composite black field sync. signal.

4) RS485 interface: It supplies 4 RS485 interfaces, which can be used to connect 4 telecontrol panels at the most (X+Y/32X1). Users can define the connection of RS485 and the telecontrol panel by "RS485 limits of authority" software. To the control panel is 32X1, user can choose which one channel is selected during 32 channels.

   Default setting is that 4 RS485 interfaces all are connecting to X+Y panel.

5) RS232 interface: connect to the computer. Users can set limits of authority by special software of the two RS485 interfaces, while, users can do long-range control by this port. The length of the serial port line is less than 30m.

6) AC power supply: The dual power design makes the system more stable and safe. Each power can work independently. The voltage is: 100~240VAC   50/60Hz.

Ⅴ MRS-32HS Front panel & rear panel of control panel

5.1 MRS-XYHS Front panel of the control panel
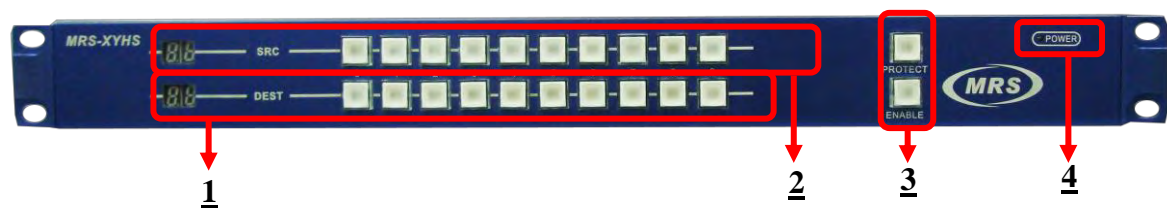
The telecontrol panel is an X+Y one; it can do the change-over of 32 input/output signals.

1. Output button: There are 10 output buttons in this area (DEST).   The 0-9 digital buttons can choose 32 channels through digital assembly. The indicator shows the current output channel.

2. Input button: There are 10 output buttons in this area (SRC).   The 0-9 digital buttons can choose 32 channels through digital assembly. The indicator shows the current output channel.

（Remarks: Please first choose output channel, then output.）

3. Function button: PROTECT and ENABLE

The locking button is used to lock all buttons on the control panel. In order to avoid misoperation, press the button, the indicator shines. Press it for 3 seconds to turn off the indicator, it is under deblocking status.

ENABLE: Press this button to make the pre-input signal as the input signal. For example, make the current output channel as 13, and the input channel is 5, please press ENABLE to make it into effect.

4. Power indicator: The blue indicator.

5.2 MRS-XYHS rear panel of the control panel

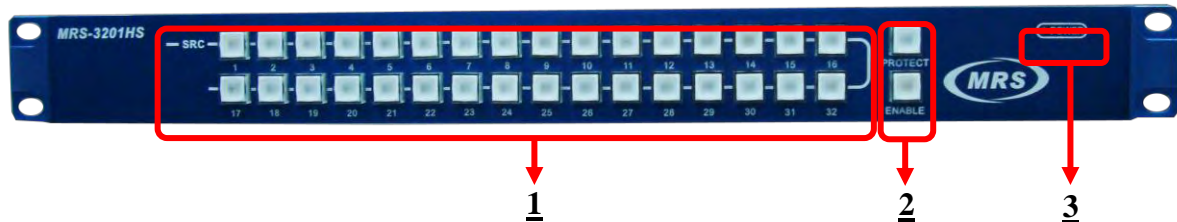**1**   **2**

1) There are two RS485 interfaces on the rear panel; any one can be connect to the host (BNC).

   Remarks: Please do not connect the two RS485 on one telecontrol panel to one host at the same time.

2) Power: AC 220V 50Hz

5.3 MRS-3201HS Front panel of the telecontrol panel

        1   **2**   **3**

The telecontrol panel is a 16X1 one; it can do the change-over of 16 input/output signals.

1．Input button: There are 32 output buttons in this area (SRC). The indicator shows the current output channel.

2． Function button: PROTECT and ENABLE

PROTECT: The locking button is used to lock all buttons on the control panel. In order to avoid misoperation, press the button, the indicator shines. Press it for 3 seconds to turn off the

ENABLE: Press this button to make the pre-input signal as the input signal. For example, the current input channel is 5, if users want to change the input channel from 5 to 7, please choose 7, and press ENABLE to make it into effect

3． Power indicator: AC 220V 50Hz

5.4 MRS-3201HS rear panel of telecontrol panel

It is same with MRS-XYHS.

Ⅵ MRS-32HS RS485 User-defined software of control authority

6.1 Installation

First, copy Mscomm32.dep, Mscomm32.ocx, and MSCOMM.SRG to C:\WINNT\system32.

Choose Mscomm32.ocx, click right-hand button "Open with" --"Other"--C:\WINNT\system32 to find Regsvr32.

Put "PCOMM.DLL" and "MRS 32HS RS485 control .exe" to one folder, execute "MRS 32HS RS485 control .exe" to finish the parameter setting.

6.2 Application

Double click MRS 32HS RS485 control .exe, open the following interface:
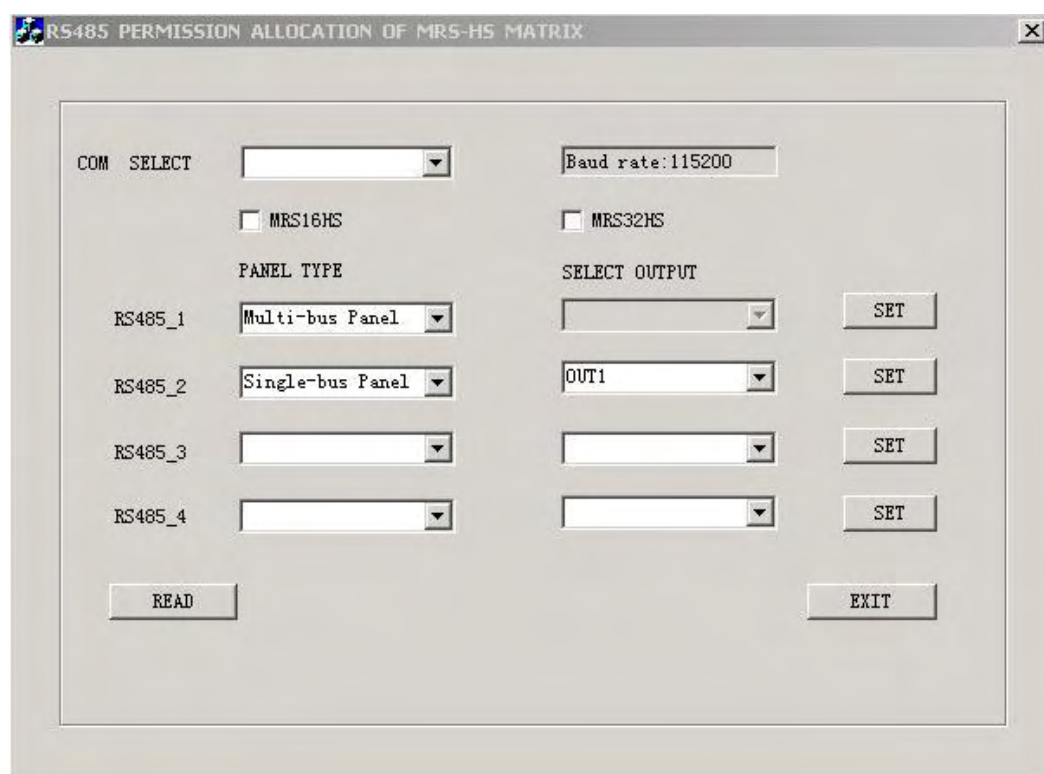
6-1   RS485   user-defined   control

1. COM Select：When the control terminals (such as computer, MOXA controller) have multiple serial ports, and will choose any port to connect to the switcher, the user needs to choose the right port to ensure the control. When there is only one serial port, the default port is (COM1).

2. RS485 distribution and control: User can do individual "Panel Type" of the two RS485 of the host. The X+Y panel is apply to MRS-XYHS, the single busbar panel is apply to MRS-3201H. When users choose the single busbar mode, please set it again to make sure which specific generatrix is under control. Please click "SETUP" to make the setting become effective.

Remarks: There is no need to restart the equipment after new setting.

Ⅶ Technical specification

The host input interface:

Input signal: 32*SD/HD-SDI

Input signal format: SD-SDI：525i30、625i25 self-adaptive

HD-SDI：720P50、720P60、720P60/M、1080i50

1080i60、1080i60/M、1080sf24、1080sf24/M、

1080P24、1080P24/M、1080P25、1080P30

Self-adaptive

Format: SMPTE 259M：270Mbit/s ;

SMPTE 274M：1.5Gbit/s

Interface type and impedance: BNC connection, 75Ω

Signal amplitude: >450mV

Max cable length: SDSDI<200m (Belden 1694A)

HDSDI<100m (Belden 1694A)

Host output interface:

Output signal interface: 32*SD/HD-SDI

Interface type and impedance: BNC connection, 75Ω

SDI output signal amplitude: 800±5%

SDI output interface jitter: <0.2UI

Synchronization input interface：

Interface type: 1*BB，PAL

Host control interface：

Control interface: 1*RS232, DB9 male

                                     4*RS485 (used in the connection of telecontrol

                                     panel),BNC connection

Host power supply:

2X120W redundancy

Size:

3RU chassis 132 mm x440 mm (19Inch)x50 mm

Control port of telecontrol panel:

Serial control port: 2*RS485 (connect to the host), BNC connection

Power supply of the telecontrol panel:

1X2.5W

Ⅷ Contact Us

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